

# How Our Returning Soldiers May Spread Pestilence

Why the Same  
Carelessness of  
Medical Officers  
Which Let Influenza  
Into the Country  
Would  
Endanger the  
United States  
with a  
New Set of  
Epidemics

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**T**HE Health Commissioner of New York, Dr. Copeland, sends out warning that our returning soldiers may spread pestilence throughout the United States. Three distinct diseases are the chief menace:

Trench fever.  
Typhus fever.  
Relapsing fever.

And the danger in each case comes from "cooties"—body lice. Until this great world war these words were never heard on the lecture platform, were never met in books of travel, war or history, were never in the newspapers. Now the "cootie" has become a part of the daily life of the soldier, lecturers discuss him, the war books deal with him and his victims keep the army hospitals busy.

Will the cootie camp in with our returning soldiers or will our quarantine authorities stop him at our ports of entrance? These three fevers are not all—typhoid fever, cholera and other diseases may be spread by our home-coming soldiers.

We have recently seen how a great country can quickly be brought under the sway of a disease like influenza. If the lesson that we have had in this respect has sunk in there is hope of a strong policy against the whole list of trench diseases.

Approximately 400,000 deaths from influenza and pneumonia have occurred among the civilian population of the United States since September 15, according to estimates of the Public Health Service. About 20,000 deaths occurred in the camps in the United States. War Department records show, and the Government incurred liabilities of more than \$170,000,000 in connection with life insurance carried by soldiers in army camps, not including those in Europe.

Horrible as these results are, what might we not expect from the trenches if a lax policy is to be pursued in the control of returning soldiers? The rigid military and medical measures which have given our army such a creditable record in the field cannot follow them into civil life, and therefore much depends upon the efficiency of our local and Federal authorities. A great test of preventive medicine is at hand.

What have been the trench diseases which we have some occasion to fear may not come to an end with the war, and which may transfer their ravages from the battlefield to the residential sections of American cities and to our rural communities?

Perhaps by familiarizing ourselves with these diseases now, and with their modes of transmission from the infected to the well, we shall be able to supplement effectively the efforts of our health authorities to keep the new enemy at bay.

Trench fever and typhus are intimately identified with trench life. The diarrheal group has, of course, played a part in our military death rate. Typhoid fever has not figured to any extent, on account of the efficacy of the newer vaccination methods. Hookworm disease has, of course, been detected among our Southern troops. Cholera has been practically confined to the Eastern front, but now that a portion of our troops are in Russia we may yet have to take this disease into consideration. Relapsing fever has raged rather fiercely in Serbia.

Trench fever is of special interest to us, and we shall say a good deal about it. What applies to its mode of transmission also applies to that of typhus and relapsing fever; that is to say, all of these fevers owe their prevalence to the "cooties," alias the "graybacks," alias just plain lice, which at last have reached a point of eminence, as I have already said, where they may be introduced without apology into polite conversation and belles-lettres. Perhaps we cannot do better than to begin with some "personal" remarks about cooties.



1—The Man Enters the Plant With His Barrack Bag Containing All His Spare Clothing.

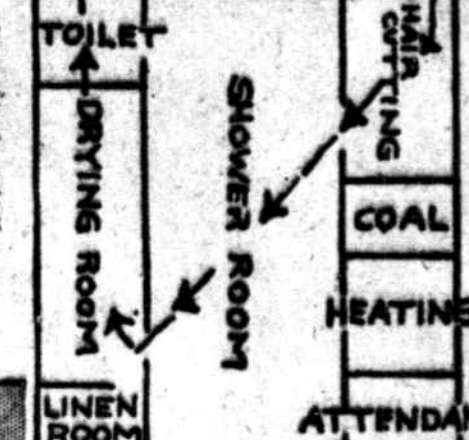


2—All Leather, Rubber and Celluloid Material and Money Are Placed in the Locker. The Man Receives Two Numbered Tags Corresponding to the Number of the Locker, and Then Proceeds to the Dismantling Room With His Barrack Bag.



3—Here He Undresses and Places All His Clothing in the Bag, Which is Tied and Numbered With One of the Tags, the Man Retaining the Remaining Tag.

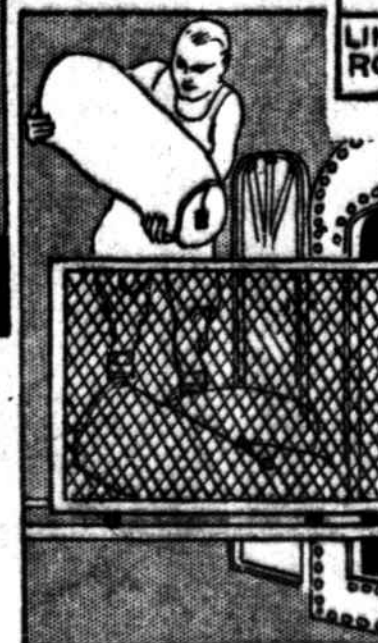
The Best Method for Destroying Cooties and Their Eggs and the One Insuring Absolute Certainty is Steam. The Man and All His Clothing and Blankets Must Be Treated.



This Diagram Shows a Plant Which Meets All the Conditions Necessary for the Delousing of Thousands of Men and Their Clothing Daily.



7—In the Dressing Room the Man Will Find His Bag, Which Has Passed Through the Steam Sterilizer. The Articles Left in the Locker Have in the Meantime Been Fumigated.



4—The Bag Is Then Placed in a Carriage Which Is Pushed into the Steam Sterilizer.



5—The Soldier Then Proceeds to the Haircutting Room, Where the Hair Is Cropped With an Electric Haircutting Machine.



6—Following This He Enters the Shower Room, Where a Bath With Cresol Soap and Warm Water Is Obtained. The Drying Room Follows, a Table Being Provided for the Clean Towels and a Receptacle to Receive the Soiled Ones.

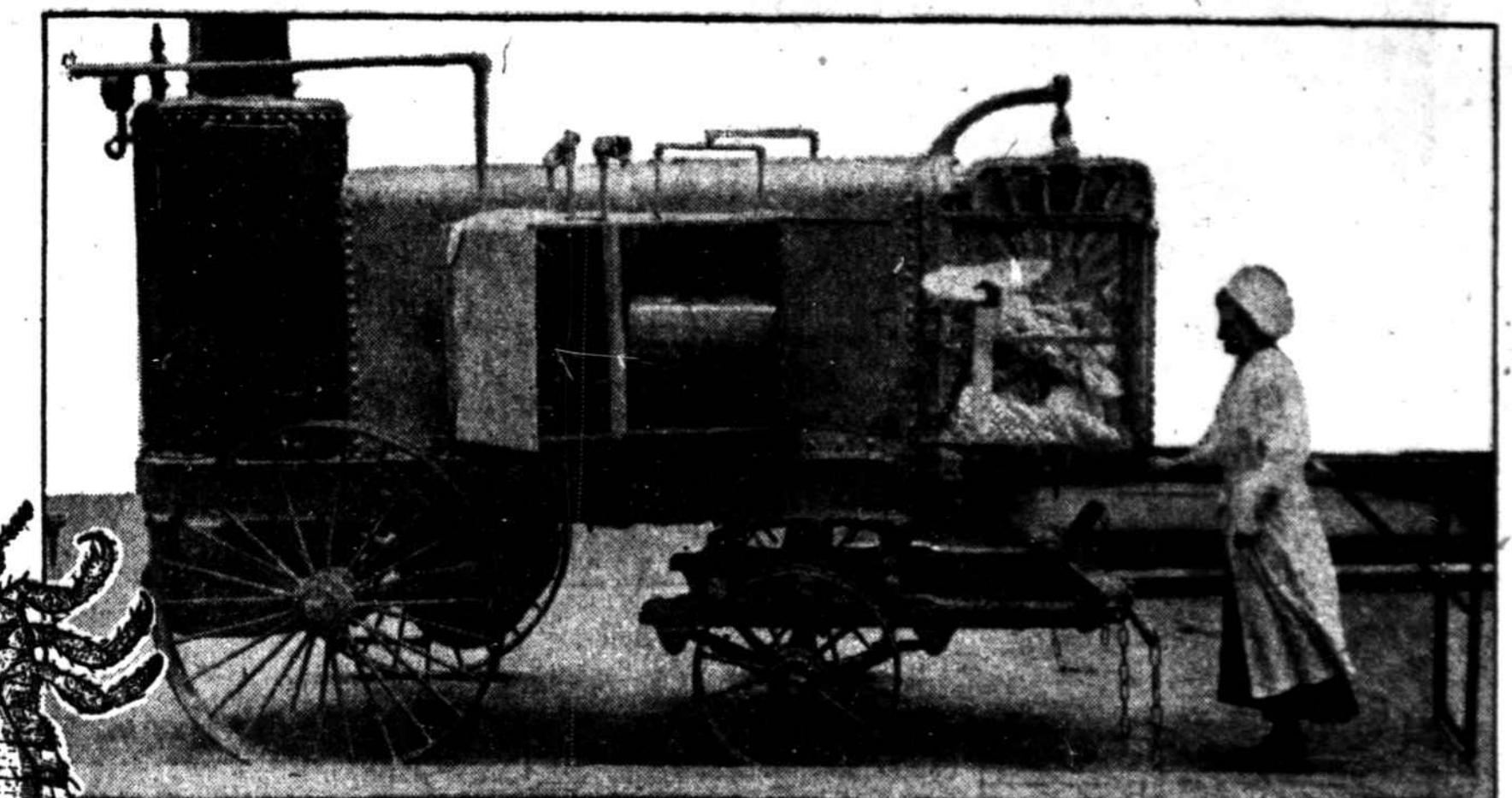
Observing the Habits of Cooties in a Pill-Box Strapped on a Soldier's Arm.

typhus. The disease has occurred in wide spread epidemics.

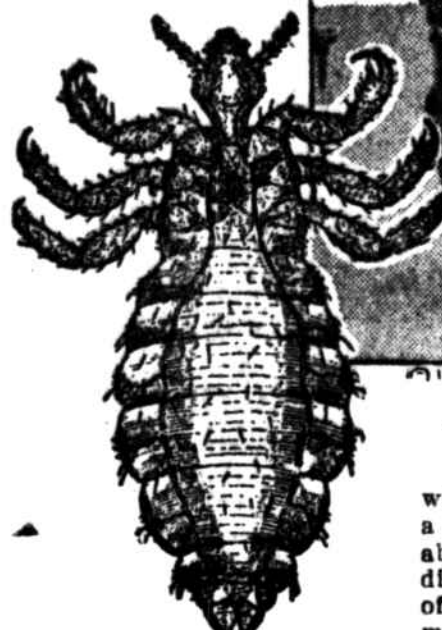
Relapsing fever is an acute infectious disease due to an organism known as the spirochete of Obermeyer, and is characterized by recurring paroxysms of high fever lasting from five to seven days. It may be transmitted by bedbugs and ticks as well as by lice. The mortality varies from 4 to 15 per cent.

The delousing of every soldier before demobilization is the only way to insure protection of the civilian population. Home-coming soldiers should be rigidly quarantined and detained until it is absolutely certain that they will not disseminate disease. The best method for destroying lice and eggs and the one insuring absolute certainty is steam. The man and all his clothing and blankets must be treated. The following plan meets all the conditions and thousands of men can be deloused daily through its application:

The man enters the porch of a delousing



A Steam Sterilizer for Field Work in Destroying Cooties in Soldiers' Clothing.



Microscopical Enlargement of a Cootie.

with the "cooties" was also put a little bunch of chaffin to enable them to hide—as ordinarily they hide in the folds of garments worn by the human victim.

After one has been bitten by a cootie which has recently fed upon the blood of a trench fever patient, a period of from six to twenty-two days passes by before symptoms appear. This is called the period of incubation. There are two types of the actual disease, one in which there is a short, evanescent fever lasting from a few days to a week, and frequently followed after a few days of normal temperature by a single short relapse; and a second type in which there is a series of relapses of the fever interrupted by periods of normal temperature.

In both forms as a rule the onset is sudden and the affection is characterized by headache, dizziness, pain in the back and particularly in the legs, and a sharp rise of temperature, usually to 102 or 103.

Pains in the shins or muscles of the legs is a very common complaint. It is often very distressing, and renders the patient restless at night. The pulse is usually in the neighborhood of 100. The face is flushed and the eyes clear and bright. The tongue is coated and the appetite lost. Debility, anemia and disordered heart action follow the acute symptoms.

Various organisms have been described as present in the blood in the course of trench fever, but definite conclusions have not been reached as to the specific germ. The one thing that is known certainly is that the louse is the medium by which the germ, whatever it is, is transmitted.

Typhus not typhoid fever is an acute disease characterized by great prostration, severe nervous symptoms and a peculiar skin eruption. Its occurrence is favored by insufficient food, overcrowding, poor ventilation and filth. The duration of an attack is about two weeks. The death rate varies from 10 to 50 per cent. The specific organism has been identified. What is known as Brill's disease is a mild form of

plant with his barrack pack containing all his spare clothing. All leather, rubber and celluloid material and money are placed in a locker. The man receives two numbered tags corresponding to the number of the locker, and then proceeds to the dismantling room with his barrack bag. Here he undresses and places all his clothing in the bag, which is tied and numbered with one of the tags, the man retaining the remaining tag.

The bag is then placed in a carriage which is pushed into the steam sterilizer. The soldier then proceeds to the haircutting room, where the hair is cropped with an electric haircutting machine. Following this he enters the shower room, where a bath with cresol soap and warm water is obtained. The drying room follows, a table being provided for the clean towels and a receptacle to receive the soiled ones. In the dressing room the man will find his bag which has passed through the steam sterilizer. The articles left in the locker have in the meantime been fumigated.